## I. CLAIMS

The status of the claims is as follows:

1. (Previously presented) A transgenic non-human mammal whose genome contains a nucleic acid sequence comprising a truncated Activin Type II receptor gene, which encodes a truncated Activin Type II receptor lacking kinase activity, and a muscle-specific promoter operably linked and integrated into the genome of the transgenic mammal, wherein the nucleic acid sequence is expressed so as to result in elevated levels of the truncated Activin Type II receptor and increased muscle mass in the transgenic mammal as compared to a corresponding nontransgenic mammal.

2. (Previously presented) The transgenic mammal of claim 1, wherein the muscle-specific promoter is a myosin light chain promoter/enhancer.

3. (Previously presented) The transgenic mammal of claim 1, wherein the Activin Type II receptor is an Activin RIIA or an Activin RIIB.

4. (Cancelled)

5. (Previously presented) The transgenic mammal of claim 1, wherein the truncated Activin RIIB comprises amino acid residues 1-174 of Activin RIIB.

6 to 12. (Cancelled)

13. (Original) An expression cassette comprising a DNA segment encoding a truncated Activin RIIB receptor gene operably linked to a muscle-specific control sequence.

14. (Original) The expression cassette of claim 13 wherein the muscle-specific promoter is a myosin light chain promoter/enhancer.

15 to 19. (Cancelled)

20. (Previously presented) A cell or cell line isolated from the transgenic mammal of claim 1, wherein said cell expresses the truncated Activin Type II receptor.

21 to 39. (Cancelled)

40. (Previously presented) A method of producing a chimeric non-human mammal, the method comprising:

obtaining an ovum from ovaries of a non-human mammal;

maturing the ovum *in vitro*;

fertilizing the mature ovum *in vitro* to form a zygote;

introducing into the zygote *in vitro* a nucleic acid construct comprising in operable association a DNA sequence encoding a truncated Activin Type II receptor, which lacks kinase activity, and a regulatory sequence that promotes expression of the DNA sequence encoding the truncated Activin Type II receptor;

maturing the zygote to a preimplantation stage embryo *in vitro*; and

transplanting the embryo into a recipient female mammal of the same species, wherein the female mammal gestates the embryo to produce a chimeric animal.

41. (Previously presented) A method of producing food products from a transgenic non-human mammal having increased muscle mass comprising:

a) introducing a transgene encoding a truncated Activin Type II receptor, which lacks kinase activity, into germ cells of a pronuclear embryo of the mammal;

b) implanting the embryo into the oviduct of a pseudopregnant female of the same species, thereby allowing the embryo to mature to full term progeny;

c) testing the progeny for presence of the transgene to identify transgene-positive progeny;

d) cross-breeding transgene-positive progeny to obtain further transgene-positive progeny; and

e) processing the progeny to obtain food products.

42. (Previously presented) A method of producing food products from a transgenic ovine, porcine, or bovine mammal having increased muscle mass comprising:

a) introducing a transgene encoding a truncated Activin Type II receptor, which lacks kinase activity, into an embryo of an ovine, porcine, or bovine mammal;

b) implanting the embryo into the oviduct of a pseudopregnant female of the same species, thereby allowing the embryo to mature to full term progeny;

c) testing the progeny for presence of the transgene to identify transgene-positive progeny;

d) cross-breeding transgene-positive progeny to obtain a transgenic ovine, porcine, or bovine mammal; and

e) processing the transgenic mammal to obtain food products.

43. (Previously presented) The transgenic non-human mammal of claim 1, wherein the mammal is ovine, porcine, or bovine.

44. (Previously presented) The chimeric non-human mammal of claim 40, wherein the mammal is ovine, porcine, or bovine.

45. (Previously presented) The transgenic non-human mammal of claim 41, wherein the mammal is ovine, porcine, or bovine.